REMARKS

Applicants respectfully request reconsideration of the present U.S. Patent application.

Claims 1-30 are pending.

Claim Rejections - 35 U.S.C. § 102

Claims 1-3, 5-8, 11, 12, 15-26, 29, and 30 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. 2003/0120906 issued to Jourdan et al.

Claim 1 recites the following:

maintaining first and second return buffers for first and second instruction pipelines respectively, both buffers having a plurality of return address entries; and
sending a request to the second instruction pipeline to fill the first return buffer with the entries in the second return buffer.

Jourdan discloses a return address stack. Jourdan does not disclose sending a request to fill a first return buffer with the entries in a second return buffer. The Office Action states that Jourdan discloses these limitations at paragraph [0018, beginning at line 24]. Applicants disagree. This cited text of Jourdan only discusses a first return address (RETURN 1) overwritten with a second return address (RETURN 2). As stated in Jourdan, a first CALL instruction (CALL1) is fetched and its predicted return address (RETURN1) is pushed onto the return stack buffer (see paragraph [0018], lines 13-15). If a second CALL instruction (CALL2) is fetched, its predicted return address (RETURN2) will be pushed onto the same return stack buffer, the first return address (RETURN1) will be overwritten by the newly pushed return address (RETURN2). See paragraph [0018], lines 22-25. Therefore, this text of Jourdan only discloses overwriting a first predicted return address with a second predicted return address. This text of Jourdan does not disclose sending a request to fill a first return buffer with the

entries in a second return buffer. These limitation are recited in claim 1. Therefore, Applicants submit that claim 1 is not anticipated by Jourdan.

Claims 2-15 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicants submit that Jourdan does not anticipate claims 2-15 for at least the reasons set forth above.

Claim 16 recites the following:

a decode unit, the decode unit to maintain a first return buffer having a plurality of return address entries; and
a branch prediction unit, the branch prediction unit to maintain a second return buffer and to fill the first return buffer with entries from the second return buffer.

As discussed above, Jourdan does not disclose filling a first return buffer with the entries from a second return buffer. The Office Action states that Jourdan discloses these limitations at paragraph [0018, beginning at line 24]. Applicants disagree. As discussed above, this cited text of Jourdan only discusses overwriting a first predicted return address (RETURN1) with a second predicted return address (RETURN2). This text of Jourdan does not disclose filling a first return buffer with the entries from a second return buffer. These limitation are recited in claim 16. Therefore, Applicants submit that claim 16 is not anticipated by Jourdan.

Claims 17-22 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicants submit that Jourdan does not anticipate claims 17-22 for at least the reasons set forth above.

Claim 23 recites the following:

maintaining a return buffer for a decode unit, the return buffer having a plurality of return address entries;

detecting a call instruction;

determining if the call instruction was detected by a branch prediction unit; and

sending a return address to the branch prediction unit if the call instruction was not detected by the branch prediction unit.

As discussed above, Jourdan discloses a return stack buffer. Jourdan does not disclose sending a return address to the branch prediction unit <u>if the call instruction was not detected by the branch prediction unit</u>. The Office Action states that Jourdan discloses these limitations at paragraph [0009] and paragraph [0018], beginning at line 24. Applicants disagree. Paragraph [0009] of Jourdan only discloses components of a processor, which include a branch prediction unit 28. However, paragraph [0009] does not disclose sending a return address to the branch prediction unit if the call instruction was not detected by the branch prediction unit. As discussed above, paragraph [0018], beginning at line 24, of Jourdan only discusses overwriting a first predicted return address (RETURN1) with a second predicted return address (RETURN2). This text of Jourdan does not disclose sending a return address to the branch prediction unit <u>if the call instruction was not detected by the branch prediction unit</u>. These limitation are recited in claim 23. Therefore, Applicants submit that claim 23 is not anticipated by Jourdan.

Claims 24-30 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicants submit that Jourdan does not anticipate claims 24-30 for at least the reasons set forth above.

Conclusion

In view of the amendments and remarks set forth above, Applicants submit that claims 1-30 are in condition for allowance and such action is respectfully solicited. The Examiner is

respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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Date: 4/22/05

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